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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:  
C.W. Luttrell

Serial No.: 09/931,599

Filed: August 16, 2001

For: ELECTRIC MOTOR STATOR  
ASSEMBLY HAVING NOVEL  
WINDING ARRANGEMENT AND  
METHOD OF MAKING SAME

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§ Group Art Unit: 3729  
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§ Examiner: Tugbang, Anthony D.  
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§ Atty. Docket: REEL:0021-2/YOD  
§ 99RE166-B  
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January 3, 2005	<i>Carla Deblaw</i>
Date	Carla Deblaw

**APPEAL BRIEF PURSUANT TO 37 C.F.R. §§ 41.31 AND 41.37**

This Appeal Brief is being filed in furtherance to the Notice of Appeal mailed on October 27, 2004, and received by the Patent Office on November 1, 2004.

The Commissioner is authorized to charge the requisite fee of \$500.00, and any additional fees which may be necessary to advance prosecution of the present application, to Account No. 01-0857, Order No. 99RE166-B/YOD (REEL:0021-2).

**1. REAL PARTY IN INTEREST**

The real party in interest is Rockwell Automation Technologies, Inc., the Assignee of the above-referenced application by virtue of the Assignment to Reliance Electric Industrial Company, a subsidiary of Rockwell Automation Technologies, Inc., recorded at reel 010498, frame 0433, and dated December 28, 1999. Accordingly,

Rockwell Automation Technologies, Inc., as the parent company of the Assignee of the above-referenced application, will be directly affected by the Board's decision in the pending appeal.

2. **RELATED APPEALS AND INTERFERENCES**

Appellant is unaware of any other appeals or interferences related to this Appeal. The undersigned is Appellant's legal representative in this Appeal.

3. **STATUS OF CLAIMS**

Claims 34-47 are currently pending. However, the Examiner previously indicated that claims 35, 36, 42, and 43 contain allowable subject matter and that these claims would be allowed if written in independent form. Thus, claims 34, 37-41, and 44-47 are currently under final rejection and, thus, are the subject of this appeal.

4. **STATUS OF AMENDMENTS**

All amendments to the present application filed prior to the Final Office Action mailed June 29, 2004 have been entered. In response to the Final Office Action, Appellant submitted an amendment to claim 44. *See* Response to Final Office Action filed August 20, 2004. In the subsequent Advisory Action, the Examiner indicated that this amendment would be entered upon the filing of a Notice of Appeal and an Appeal Brief. Consequently, as of the date of this filing, Appellant believes that the amendment submitted in the Response to the Final Office Action will now also be entered. A copy of the claims on appeal in their amended form is attached in the Claims Appendix of this Appeal Brief.

5. **SUMMARY OF CLAIMED SUBJECT MATTER**

The present invention relates generally to the field of electric motors and other electromechanical machines. *See, e.g.*, Application, page 1, lines 5-7. More specifically, the present techniques relate to an improved winding arrangement for the stator of an electromechanical machine. *See, e.g., id.* at page 1, lines 7-9.

With regard to the exemplary embodiment described in independent claim 34, discussions about the recited features of claim 34 can be found at least in the below cited locations of the specification and drawings. By way of example, an embodiment in accordance with the present invention relates to a method for making an electric motor stator, the method comprising inserting a first coil group for a first electrical phase (e.g., A1) via an insertion tool (e.g., 60) into a stator core (e.g., 54) through a first end thereof and inserting a first coil group for a second electrical phase (e.g., B1) via the insertion tool into the stator core through a second end thereof opposite the first end. *See, e.g., id.* at page 14, line 27 – page 15, line 20; *id.* at page 13, lines 11-20; *id.* at page 12, lines 3-16; FIGS. 6-12. The method further comprises inserting a first coil group for a third electrical phase (e.g., C1) via the insertion tool into the stator core through the first end thereof and inserting a second coil group for the first electrical phase (e.g., A2) via the insertion tool into the stator core through the second end thereof. *See, e.g., id.* at page 15, lines 20-24; *id.* at page 13, lines 11-20; *id.* at page 12, lines 3-16; FIGS. 6-12. Still further, the method also includes inserting a second coil group for the second electrical phase (e.g., B2) via the insertion tool into the stator core through the first end thereof and inserting a second coil group for the third electrical phase (e.g., C2) via the insertion tool into the stator core through the second end thereof. *See, e.g., id.* at page 15, lines 20-24; *id.* at page 13, lines 11-20; *id.* at page 12, lines 3-16; FIGS. 6-12.

With regard to the exemplary embodiment described in independent claim 41, discussions about the recited features of claim 41 can be found at least in the below cited locations of the specification and drawings. By way of example, another embodiment in accordance with the present invention relates to a method for making an electric motor stator, the method comprising inserting a first coil group for a first electrical phase (e.g., A1) via an insertion tool (e.g., 60) into a stator core (e.g., 54), leads (e.g., T1) of the first coil group exiting a first end of the stator core and inserting a second coil group for a second electrical phase via the insertion tool into the stator core, leads (e.g., T2) of the second coil group exiting a second end of the stator core opposite the first end. *See, e.g., id.* at page 14, line 27 – page 15, line 20; *id.* at page 13, lines 11-20; *id.* at page 12, lines

3-16; *id.* at page 10, lines 9-14 (noting this passage mistakenly refers to FIG. 1, when the passage is clearly descriptive of FIG. 2); FIGS. 2 and 6-12. The method also includes inserting a third coil group for a third electrical phase (e.g., C1) via the insertion tool into the stator core, leads (e.g., T3) of the third coil group exiting the first end of the stator core and inserting a fourth coil group for the first electrical phase (e.g., A2) via the insertion tool into the stator core, leads (e.g., T1) of the fourth coil group exiting the second end of the stator core. *See, e.g., id.* at page 15, lines 20-24; *id.* at page 13, lines 11-20; *id.* at page 12, lines 3-16; *id.* at page 10, lines 9-14; FIGS. 2 and 6-12.

Additionally, the method also comprises inserting a fifth coil group for the second electrical phase (e.g., B2) via the insertion tool into the stator core, leads (e.g., T2) of the fifth coil group exiting the first end of the stator core and inserting a sixth coil group for the third electrical phase (e.g., C2) via the insertion tool, leads (e.g., T3) of the sixth coil group exiting the second end of the stator core.

6. **GROUND OF REJECTION TO BE REVIEWED ON APPEAL**

**First Ground of Rejection for Review on Appeal:**

Appellant respectfully urges the Board to review and reverse the Examiner's first ground of rejection in which the Examiner rejected claims 34, 37, 38, 41, 44, and 45 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,333,329 to Linkous ("the Linkous reference").

**Second Ground of Rejection for Review on Appeal:**

Appellant respectfully urges the Board to review and reverse the Examiner's second ground of rejection in which the Examiner rejected claims 39, 40, 46, and 47 under 35 U.S.C. § 103(a) as being rendered obvious by Linkous in view of U.S. Patent No. 5,231,324 to Kawamura et al. ("the Kawamura et al. reference").

7. **ARGUMENT**

As discussed in detail below, the Examiner has improperly rejected the pending claims. Further, the Examiner has misapplied long-standing and binding legal precedents

and principles in rejecting the claims under Sections 102 and 103. Accordingly, Appellant respectfully requests full and favorable consideration by the Board, as Appellant strongly believes that claims 34-47 are currently in condition for allowance.

A. **Ground of Rejection No. 1:**

The Examiner rejected claims 34, 37, 38, 41, 44, and 45 under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 3,333,329 to Linkous. While the Examiner rejected both of independent claims 34 and 41 on the basis of the Linkous reference, each of these independent claims will be discussed separately below. Appellant respectfully traverses this rejection.

1. **Judicial precedent has clearly established a legal standard for a prima facie anticipation rejection.**

Anticipation under Section 102 can be found only if a single reference shows exactly what is claimed. *Titanium Metals Corp. v. Banner*, 227 U.S.P.Q. 773 (Fed. Cir. 1985). Thus, for a prior art reference to anticipate under Section 102, every element of the claimed invention must be identically shown in a single reference. *In re Bond*, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). Moreover, the prior art reference also must show the identical invention “in as complete detail as contained in the ... claim” to support a *prima facie* case of anticipation. *Richardson v. Suzuki Motor Co.*, 9 U.S.P.Q. 2d 1913, 1920 (Fed. Cir. 1989) (emphasis added). Accordingly, Appellant needs only point to a single element not found in the cited reference to demonstrate that the cited reference fails to anticipate the claimed subject matter.

2. **The Examiner’s rejection of independent claim 34 is improper because the rejection fails to establish a prima facie case of anticipation.**

Independent claim 34 recites:

A method for making an electric motor stator, the method comprising steps of:

- (a) inserting a first coil group for a first electrical phase via an insertion tool into a stator core through a first end thereof;
- (b) inserting a first coil group for a second electrical phase via the insertion tool into the stator core through a second end thereof opposite the first end;
- (c) inserting a first coil group for a third electrical phase via the insertion tool into the stator core through the first end thereof;
- (d) inserting a second coil group for the first electrical phase via the insertion tool into the stator core through the second end thereof;
- (e) inserting a second coil group for the second electrical phase via the insertion tool into the stator core through the first end thereof; and
- (f) inserting a second coil group for the third electrical phase via the insertion tool into the stator core through the second end thereof.

In rejecting independent claim 34, the Examiner asserted that the Linkous reference discloses all of the recited features of the claim. *See* Final Official Action mailed June 29, 2004, page 2. The Linkous reference is generally directed to a method for placing one or more electrical coils in a desired spatial relationship with respect to a magnetic core. *See* Linkous, col. 1, lines 11-16. The reference is further concerned with an economical and effective method for compacting one or more electrical coils within the magnetic core for more effective utilization of coil-accommodating space. *See id.* at col. 1, lines 49-55. The cited reference teaches that such compaction may be achieved through application of two power impulses of sufficient magnitude to create an electromagnetic force adequate to compact coil groups within slots of a stator core. *See id.* at col. 5, lines 1-31; *see also* FIGS. 1 and 2 (showing the coils before application of power impulse), FIGS. 3 and 4 (showing the coils after application of power impulse). In accordance with these teachings, the Linkous reference discloses two coil groups 10 and 11 having end turns extending from both ends of a stator core 13. *See id.* at col. 4, lines 38-46; FIGS. 1, 3, 6, and 12. Coil group 10 includes five coils 38-42 and coil group 11 comprises five coils 33-37. *See id.* at col. 6, lines 13-19; FIG. 6. Each of these coil groups defines one of the two poles of the Linkous apparatus. *See id.*

However, as discussed below, the Linkous reference fails to disclose every element of independent claim 34. For example, the reference fails to disclose “inserting a first coil group for a first electrical phase via an insertion tool *into a stator core through a first end thereof*” (emphasis added) and also “inserting a first coil group for a second electrical phase via the insertion tool *into the stator core through a second end thereof opposite the first end*” (emphasis added), as recited in claim 34. The Examiner asserts that stator core 13 and coil groups 10 and 11, which extend from two sides of stator 13, are sufficient to disclose the subject matter recited by claim 34. This assertion is incorrect.

The Examiner’s present rejection is based, at least in part, on a mistaken construction of the claim language. The error in the Examiner’s construction is evident upon analysis of the claim. However, Appellant believes the proper grammatical construction of the claim may be best illustrated and understood with reference to two exemplary sentences that are independent of the present claim. Accordingly, the following sentences are presented for consideration:

John walked into the house through the front door. (sentence 1)

John walked into the house *and* through the front door. (sentence 2)

In the first sentence, it is clear that “John” is the subject of the sentence and that “walked” is the verb (past participle), or action that John performed. The phrases “into the house” and “through the front door” are prepositional phrases that act as adverbs, modifying the verb “walked.” In this example, it is evident that “into the house” discloses *where* John walked and that “through the front door” discloses *how* John walked into the house (i.e., he walked into the house *by* walking through the front door). Thus, for sentence 1 to be true, John would have to walk through the front door into the house.

Conversely, because the conjunction “and” separates the two prepositional phrases, the second sentence would be true so long as John walked into the house and, at

some indeterminate point in time, walked through the front door. For instance, the statement would be true if John entered the house through a *back door* and then exited the house through the front door. Though the difference in language of the two sentences is only one word, these two sentences cannot reasonably be equated as they each have a distinct meaning. However, this is precisely the error made by the Examiner in rejecting independent claim 34.

Turning now to the instant claim, inserting a coil group “into a stator core through a first end thereof” is clearly recited. Independent claim 34 does not recite “into a stator core and through a first end thereof.” Appellant notes that the recited language, “into a stator core through a first end thereof,” should be analyzed similarly to the first exemplary sentence presented above, and consists of two prepositional phrases. The first prepositional phrase, “into a stator core,” functions as an adverb that modifies the verb “inserting.” In other words, “into a stator core” informs the reader *where* the coil group is inserted. The second prepositional phrase, “through a first end thereof,” also functions as an adverb, informing the reader of *how* the coil group is inserted. Thus, in the present case, inserting a coil group “into a stator core through a first end thereof” indicates that the coil group is inserted into a stator core *by* inserting the coil through a first end of the stator core. Similarly, the recitation of inserting a coil group “into a stator core through a second end thereof” suggests that the coil group is inserted *into* the stator core *by* inserting the coil group through a second end.

Further, the construction provided above is supported by the present specification. Appellant notes that when interpreting a claim during patent examination, the pending claims must be given their broadest reasonable interpretation consistent with the specification. *In re Hyatt*, 211 F.3d 1367, 1372, 54 U.S.P.Q.2d 1664, 1667 (Fed. Cir. 2000). Further, the broadest reasonable interpretation of the claims must be consistent with the interpretation that those skilled in the art would reach. *In re Cortright*, 165 F.3d 1353, 1359, 49 U.S.P.Q.2d 1464, 1468 (Fed. Cir. 1999). One skilled in the art having the benefit of the present disclosure would easily interpret the claims in the manner described



above. While the Examiner correctly noted that limitations cannot be read into the claims from the specification, the Examiner's claim construction is not consistent with either the Appellant's present specification or, for the reasons provided above, the interpretation that would be reached by one skilled in the art. *See* Advisory Action mailed September 30, 2004, page 2. Moreover, the current specification is more than adequate to resolve any perceived ambiguity in the proper construction of the present claims. *See, e.g.,* Application, page 14, line 27 – page 15, line 27.

Ultimately, nothing in the Linkous reference indicates from which side a given coil group was inserted into the stator core. The Linkous reference merely teaches coil groups which, at most, extend from the front and back ends of a stator core, but the reference *fails to teach, disclose, or suggest* from which direction the coil groups were introduced into the stator core. Indeed, the only information that the cited reference provides concerning the introduction of the coil groups into the stator core is that insertion of these coil groups may be performed by a machine. *See* Linkous, col. 4, lines 38-42. Consequently, the Linkous reference cannot disclose “inserting a first coil group for a first electrical phase via an insertion tool *into a stator core through a first end* thereof” (emphasis added) and also “inserting a first coil group for a second electrical phase via the insertion tool *into the stator core through a second end* thereof opposite the first end” (emphasis added), as recited in claim 34.

Secondly, the Linkous reference fails to teach inserting coil groups for a *second and third electrical phase*. Every winding recited by the Linkous reference is for a single phase machine. For example, FIG. 1 and FIG. 10 of Linkous both show a single pair of leads 48-49 between the power supply 21 and the winding 12. Similarly, FIG. 12 illustrates a single pair of leads 82 and 84 extending from stator core 70 to power supply 69. As would be appreciated by one skilled in the art, for an electric motor stator to operate under the power of a second or third electrical phase, the windings must connect to the power supply through three or more leads. Thus, the Linkous reference does not teach inserting coil groups with a sufficient number of connections to the power supply to

support more than one electrical phase. Furthermore, nothing in the cited reference even suggests that the coils within the coil groups have been or could be arranged within the stator core in a manner necessary to facilitate use of a second and third electrical phase. Therefore, the cited reference fails to teach inserting a coil group for a second or third electrical phase, as recited in independent claim 34.

Moreover, contrary to the Examiner's assertion otherwise, one skilled in the art would also appreciate that coils 33-37 and 38-42 of the Linkous reference could not be used to conduct first, second, and third phases of electricity. *See* Final Office Action mailed June 29, 2004, page 2-3. As discussed above, these coils 33-37 and 38-42 from coil groups 11 and 10, respectively. Each of these groups defines *one* magnetic pole of the motor. Because each coil of a coil group operates in conjunction with the other coils in that group, and is electrically interconnected with the other coils in the group, all of the coils of a coil group must conduct the same electrical current and, consequently, be in phase with one another. *See* Linkous, col. 8, lines 29-40; FIG. 8. Thus, it would be *impossible* for coils 33-37 and 38-42 of the Linkous apparatus to conduct three distinct phases of electrical power.

Because the reference fails to disclose each element recited by the instant claim, the Linkous reference fails to anticipate independent claim 34. Thus, the Examiner's rejection of independent claim 34 is clearly improper. Accordingly, Appellant requests the Board overturn the rejection and allow independent claim 34 and its respective dependent claims.

3. **The Examiner's rejection of independent claim 41 is improper because the rejection fails to establish a prima facie case of anticipation.**

Independent claim 41 recites:

A method for making an electric motor stator, the method comprising steps of:

- (a) inserting a first coil group for a first electrical phase via an insertion tool into a stator core, leads of the first coil group exiting a first end of the stator core;
- (b) inserting a second coil group for a second electrical phase via the insertion tool into the stator core, leads of the second coil group exiting a second end of the stator core opposite the first end;
- (c) inserting a third coil group for a third electrical phase via the insertion tool into the stator core, leads of the third coil group exiting the first end of the stator core;
- (d) inserting a fourth coil group for the first electrical phase via the insertion tool into the stator core, leads of the fourth coil group exiting the second end of the stator core;
- (e) inserting a fifth coil group for the second electrical phase via the insertion tool into the stator core, leads of the fifth coil group exiting the first end of the stator core; and
- (f) inserting a sixth coil group for the third electrical phase via the insertion tool, leads of the sixth coil group exiting the second end of the stator core.

The Linkous reference also fails to disclose every element of independent claim 41. For instance, Appellant notes that independent claim 41 recites “inserting a first coil *group* for a *first electrical phase* via an insertion tool into a stator core, leads of the first coil group *exiting a first end* of the stator core” and “inserting a second coil *group* for a *second electrical phase* via the insertion tool into the stator core, leads of the second coil group *exiting a second end* of the stator core opposite the first end” (emphasis added). Claim 41 also recites “inserting a *third coil group* for a *third electrical phase* via the insertion tool into the stator core” (emphasis added).

As summarized above with respect to the improper rejection of claim 34, the arguments for which are incorporated herein by reference, the Linkous reference only discloses inserting coil groups for a first electrical phase. Every figure in the Linkous reference illustrates a winding connected to a power supply by only two leads. However, a three phase power supply requires at least three leads connecting to the windings.

Thus, the device taught by Linkous lacks enough connections to the power supply to be powered by three electrical phases. Indeed, as also discussed above, the Linkous apparatus is *physically incapable* of conducting three phases of electrical power. Consequently, the Linkous et al. reference cannot suggest inserting coil groups for first, second, and third electrical phases as recited by the instant claim. For at least this reason, claim 41 is not anticipated by the Linkous et al. reference.

Further, the Linkous reference fails to disclose inserting coil groups with leads exiting *a second end* of the stator core. Every coil group taught by the Linkous reference has leads exiting only from a first side. While nothing in the Linkous specification text discloses from which side the leads to a given coil group exits the stator core, FIGS. 1, 3, 5, 8, 10, and 12 of the Linkous reference all indicate that the leads of each coil group exit the stator core from the same side. Indeed, nothing in Linkous even suggests inserting a coil group with a lead exiting the stator core from a second side. Accordingly, the Linkous reference fails to teach inserting a coil group into the stator core with leads exiting a second end of the stator core, as recited in the instant claims.

Moreover, the Examiner's contention that "each coil group of Linkous includes multiple windings of individual leads 16" does not obviate the foregoing deficiency because the Examiner gives the word "lead" an unreasonably broad interpretation. *See* Office Action mailed June 29, 2004, page 3. The American Heritage Dictionary defines "lead" as a "conductor by which one circuit element is electrically connected to another." AMERICAN HERITAGE DICTIONARY, (4th ed., 2000). One skilled in the art understands a coil to be a circuit element, not merely a means to connect circuit elements. Further, the reference explicitly refers to elements 48, 49, 82, and 84 as leads, while defining element 16 as a conductor. Thus, the Examiner's assertion that a conductor 16 comprises one continuous lead is inconsistent with, and a gross distortion of, the plain meaning attributed to the term "lead" by one of ordinary skill in the art.

Still further, the Linkous reference fails to disclose six coil groups as clearly recited by independent claim 41. The Examiner suggests that coils 33-35 and 38-40 may be related to the six coils recited by the present claim. However, “coil group” is a term of art that is generally applied to one or more coils performing a single function. In fact, in one embodiment, the Linkous reference clearly reserves the term “coil group” for the *two* coil groups 10 and 11, comprising coils 38-42 and 33-37, respectively. *See* Linkous, col. 6, lines 13-19. In another embodiment, *four* coil groups 51-54 are provided. *See id.* at col. 8, line 73 – col. 9, line 2. In both cases, each coil group defines *one magnetic pole*. Further, Appellant’s disclosure also discusses that a single coil group typically provides a single pole for a single phase of electrical power. *See* Application, page 1. As discussed above, coils 33-35 are electrically interconnected and are parts of a single coil group 11. Likewise, coils 38-40 are electrically interconnected and are units of coil group 10. Though a coil group *may* consist of a single coil if only one coil is used for a magnetic pole, it does not logically follow that every coil may be referred to as a coil group. In the present case, because coils 33-35 operate in consort with coils 36 and 37 to provide *one, single magnetic pole*, coils 33-35 cannot reasonably be described as distinct coil groups. Similarly, coils 38-40 cannot be equated with three distinct coil groups. For these reasons, Appellant respectfully submits that the Examiner’s assertion with respect to these coils is contrary to both the understanding of one of ordinary skill in the art and the Linkous reference itself.

Because the reference fails to disclose each element recited by the instant claim, the Linkous reference fails to anticipate independent claim 41. Thus, the Examiner’s rejection of independent claim 41 is clearly improper. Accordingly, Appellant requests the Board overturn the rejection and allow independent claim 41 and the claims depending therefrom.

B. **Ground of Rejection No. 2:**

The Examiner rejected claims 39, 40, 46, and 47 under 35 U.S.C. § 103(a) as being unpatentable over the Linkous reference in view of the Kawamura et al. reference. Appellant respectfully traverses this rejection.

The burden of establishing a *prima facie* case of obviousness falls on the Examiner. *Ex parte Wolters and Kuypers*, 214 U.S.P.Q. 735 (B.P.A.I. 1979). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention absent some teaching or suggestion supporting the combination. *ACS Hospital Systems, Inc. v. Montefiore Hospital*, 732 F.2d 1572, 1577, 221 U.S.P.Q. 929, 933 (Fed. Cir. 1984). Accordingly, to establish a *prima facie* case, the Examiner must not only show that the combination includes all of the claimed elements, but also a convincing line of reason as to why one of ordinary skill in the art would have found the claimed invention to have been obvious in light of the teachings of the references. *Ex parte Clapp*, 227 U.S.P.Q. 972 (B.P.A.I. 1985). When prior art references require a selected combination to render obvious a subsequent invention, there must be some reason for the combination other than the hindsight gained from the invention itself, i.e., something in the prior art as a whole must suggest the desirability, and thus the obviousness, of making the combination. *Uniroyal Inc. v. Rudkin-Wiley Corp.*, 837 F.2d 1044, 5 U.S.P.Q.2d 1434 (Fed. Cir. 1988).

Each of the foregoing rejected claims depends from either independent claim 34 or 41 discussed above. Moreover, each of the Examiner's obviousness rejections is founded upon the Linkous reference, which is also discussed above. With this in mind, Appellant respectfully asserts that the Kawamura et al. reference, employed in conjunction with the Linkous reference, does not obviate the deficiencies of the Linkous reference as discussed in the foregoing remarks regarding the Examiner's rejections of independent claims 34 and 41. Accordingly, Appellant respectfully asserts that the instant claims are not only patentable for their respective dependencies on allowable base claims, but also by virtue of the additional features recited therein.

In light of the forgoing remarks, Appellant respectfully requests that the Board withdraw the obviousness rejections in relation to claims 39, 40, 46, and 47. Additionally, Appellant respectfully requests that the Board direct the Examiner to allow the instant claims.

**Conclusion**


Appellant respectfully submits that all pending claims are in condition for allowance. However, if the Examiner or Board wishes to resolve any other issues by way of a telephone conference, the Examiner or Board is kindly invited to contact the undersigned attorney at the telephone number indicated below.

**General Authorization for Extensions of Time**

In accordance with 37 C.F.R. § 1.136, Appellant hereby provides a general authorization to treat this and any future reply requiring an extension of time as incorporating a request therefor. Furthermore, Appellant authorizes the Commissioner to charge the appropriate fee for any extension of time to Deposit Account No. 01-0857, Order No. 99RE166-B/YOD (REEL:0021-2).

Respectfully submitted,

Date: January 3, 2005

  
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8. **APPENDIX OF CLAIMS ON APPEAL**

**Listing of Claims:**

34. A method for making an electric motor stator, the method comprising steps of:
- (a) inserting a first coil group for a first electrical phase via an insertion tool into a stator core through a first end thereof;
  - (b) inserting a first coil group for a second electrical phase via the insertion tool into the stator core through a second end thereof opposite the first end;
  - (c) inserting a first coil group for a third electrical phase via the insertion tool into the stator core through the first end thereof;
  - (d) inserting a second coil group for the first electrical phase via the insertion tool into the stator core through the second end thereof;
  - (e) inserting a second coil group for the second electrical phase via the insertion tool into the stator core through the first end thereof; and
  - (f) inserting a second coil group for the third electrical phase via the insertion tool into the stator core through the second end thereof.
35. A method as set forth in claim 34, wherein the stator core is supported on a rotatable support structure, and wherein the support structure is rotated 180 degrees between first and second positions for each successive insertion step.
36. A method as set forth in claim 35, wherein the support structure has a centerline lying at a same location when the support structure is in the first and second positions.
37. A method as set forth in claim 34, wherein each coil group has leads exiting the stator core from the end through which the coil group is inserted.

38. A method as set forth in claim 34, wherein each coil group includes at least one winding disposed singularly in a winding slot of the stator core and a plurality of windings disposed in winding slots shared with windings of a different coil group.

39. A method as set forth in claim 38, wherein each coil group has two windings disposed singularly in respective winding slots and four windings disposed in respective winding slots shared with windings of a different coil group.

40. A method as set forth in claim 34, wherein the coil groups are configured and inserted to define a three-phase, two-pole stator.

41. A method for making an electric motor stator, the method comprising steps of:

- (a) inserting a first coil group for a first electrical phase via an insertion tool into a stator core, leads of the first coil group exiting a first end of the stator core;
- (b) inserting a second coil group for a second electrical phase via the insertion tool into the stator core, leads of the second coil group exiting a second end of the stator core opposite the first end;
- (c) inserting a third coil group for a third electrical phase via the insertion tool into the stator core, leads of the third coil group exiting the first end of the stator core;
- (d) inserting a fourth coil group for the first electrical phase via the insertion tool into the stator core, leads of the fourth coil group exiting the second end of the stator core;
- (e) inserting a fifth coil group for the second electrical phase via the insertion tool into the stator core, leads of the fifth coil group exiting the first end of the stator core; and
- (f) inserting a sixth coil group for the third electrical phase via the insertion tool, leads of the sixth coil group exiting the second end of the stator core.

42. A method as set forth in claim 41, wherein the stator core is supported on a rotatable support structure, and wherein the support structure is rotated 180 degrees between first and second positions for each successive insertion step.

43. A method as set forth in claim 42, wherein the support structure has a centerline lying at a same location when the support structure is in the first and second positions.

44. A method as set forth in claim 41, wherein each coil group is inserted through the end of the stator core from which the respective leads exit.

45. A method as set forth in claim 41, wherein each coil group includes at least one winding disposed singularly in a winding slot of the stator core and a plurality of windings disposed in winding slots shared with windings of a different coil group.

46. A method as set forth in claim 45, wherein each coil group has two windings disposed singularly in respective winding slots and four windings disposed in respective winding slots shared with windings of a different coil group.

47. A method as set forth in claim 41, wherein the coil groups are configured and inserted to define a three-phase, two-pole stator.